



# **US Army Aviation and Troop Command**



## **INTEGRATED MATERIEL MANAGEMENT CENTER**

### **Modernization Through Spares**

**Huntsville, Alabama  
28 May 1997**

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# MANAGEMENT THRU SPARES



DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
RESEARCH DEVELOPMENT AND ACQUISITION  
103 ARMY PENTAGON  
WASHINGTON, DC 20310-0103



MEMORANDUM FOR SEE DISTRIBUTION  
SUBJECT: Modernization Thru Spares

22 JAN 96

The Army will face the reality that we will not have sufficient funds in our future to adequately support our 1000 weapon systems. We will have to ways to leverage the funds we do have so as to achieve maximum return.

The Army spent several billions of dollars annually on the procurement of spare parts. It was used in two procurement systems, repetitive, build-to-stock acquisition. They result in the replacement of surplus parts numbers but with little improvement in the part itself or the higher-level assembly or sub-system.

We have been talking previously to some performance specifications for the improved spare parts which are applied as they are received. New design and manufacturing techniques are beginning to be used to improve the spare and improve the end user. While the old strategy was based on a good price as a value add, for example, it is time to begin buying and production along with dramatic production in the spare parts and dramatic improvements in performance and reliability.

LEON E. SALOMON  
General, USA  
Commanding General  
U.S. Army Materiel Command

GILBERT F. DECKER  
Assistant Secretary of the Army  
(Research, Development and  
Acquisition)



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Honorable Strom Thurmond  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, D.C. 20515-6035

2 DEC 96

Section 312 of Public Law (PL) 104-201 . . . with four specific statutes

- Competition requirements of 10 USC 2304
- Core Logistics requirements of 10 USC 2464
- Public / Private competition requirements of 10 USC 2469
- Requirements relating to contract bundling and spare parts breakout in 15 USC 644 (a) and (1) and implementing regulations in the Defense Federal Acquisition Regulation Supplement.

GILBERT F. DECKER  
Assistant Secretary of the Army  
(Research, Development and  
Acquisition)

A Spares Improvement Program which employs Acquisition Reform to define requirements in present day technologies during the Buy / Overhaul Process, thereby improving the overall Weapon System.



# FOCUS AREAS



- ***Technology Modernization*** →

- Commercial Off-the-Shelf (COTS)
- Technology Infusion
- Commercial Business Practices

**Insert 90's Technology  
(Without R & D Funds)**

- ***Acquisitions Strategies*** →

- Incentives
- Long Term Contracts
- Performance Specifications
- Groupings Of Components
- Commercialization

**Acquisition Reform Flexibility's**

- ***Government - Vendor*** →

- Evolution, Not Revolution
- Lease vs. Buy
- Privatization
- Warranty vs. Repair, Resale, Etc.
- Leverage Commercial Practice

**Teaming Relationships**



# WHY MODERNIZATION THRU SPARES

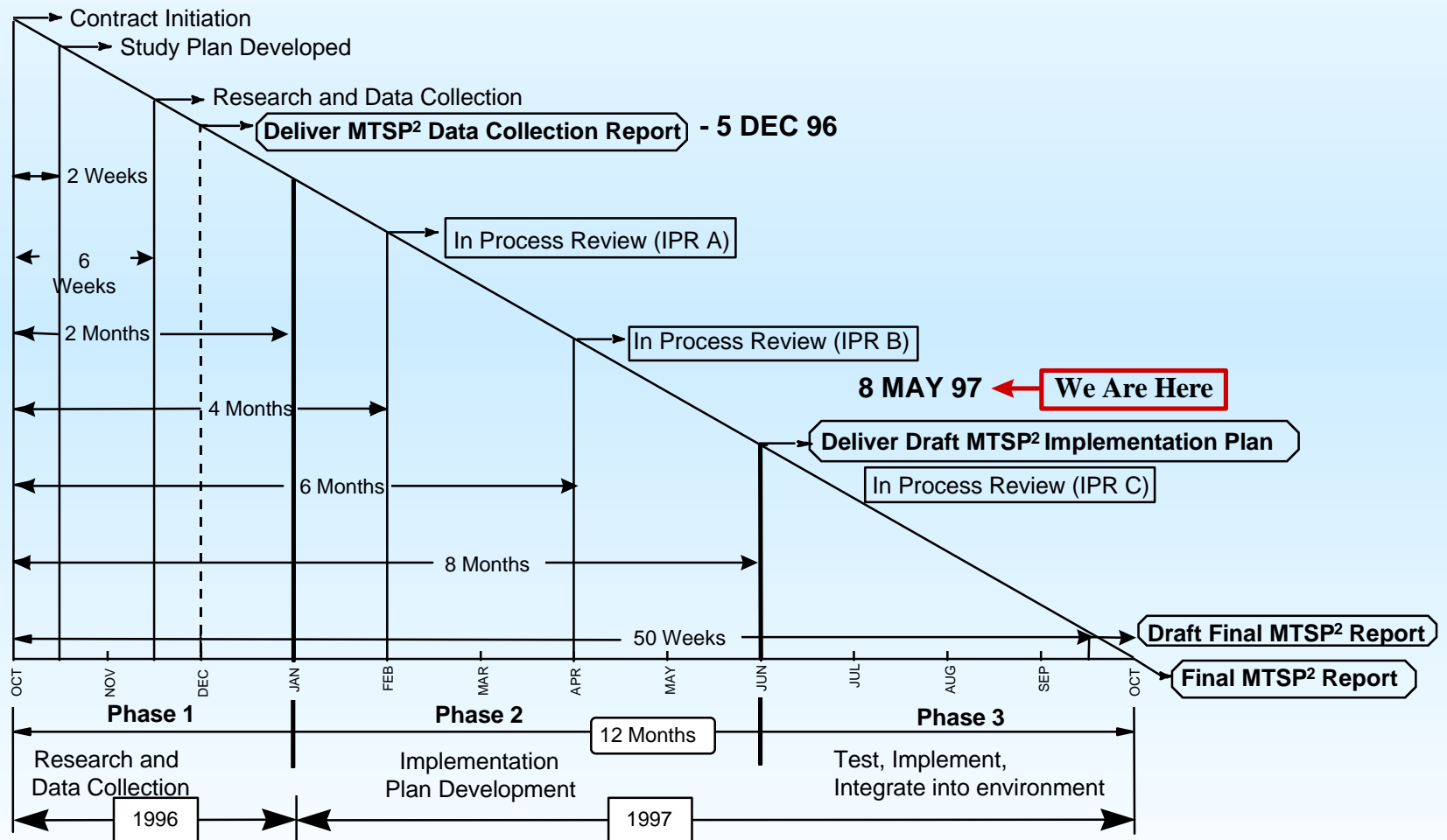
	VECP	OSCR	MTS
Non-Recurring Funding	Govt/Industry	Govt	Industry
Recurring Funding	Govt	Govt	Govt
Benefit Analysis	Savings to Investment Ratio /	Benefit to Investment Ratio / Payback Period	Readiness At Less Cost
Payback Period	< 3 years	< 10 years	Now
Competition	Sole Source	Open	Open
Approval Authority	MSC	AMC*	MSC
Risk	GOVT	GOVT	INDUSTRY/govt

**MTS Is a Method to Improve Spares Which Do Not Meet VECP / OSCR Guide Lines**

\*BELOW \$100K MSC APPROVAL



# ATCOM APPROACH & SCHEDULE





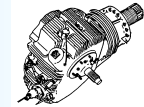
# Phase I Modernization Thru Spares Pilot Program



AH-64A Apache

29  
INITIAL  
CANDIDATES

18 CANDIDATES  
(13 LINES IN BUY/  
OVERHAUL)



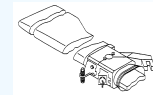
Engine Nose Gear Box



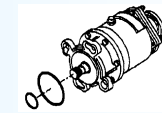
UH-60 Black Hawk

128  
INITIAL  
CANDIDATES

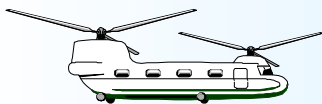
109 CANDIDATES  
(30 LINES IN BUY/  
OVERHAUL)



Tail Rotor blade



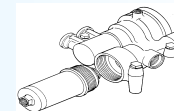
T700 Engine Starter



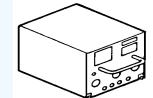
CH-47D Chinook

74  
INITIAL  
CANDIDATES

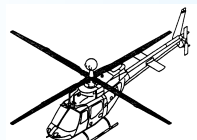
58 CANDIDATES  
(16 LINES IN BUY/  
OVERHAUL)



Accumulator



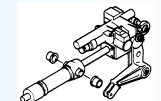
AFCS Computer



OH-58D Kiowa Warrior

61  
INITIAL  
CANDIDATES

56 CANDIDATES  
(14 LINES IN BUY/  
OVERHAUL)



Elec-Mech Actuator



# T700 ENGINE STARTER CBD ANNOUNCEMENT CONTENT

- HISTORICALLY STARTER RETURNED FROM FIELD
  - CRACKS IN STARTER AIR INLET HOUSING
  - WIRING HARNESS DAMAGE
  - OIL LEAKS IN CARBON FACE SEAL

- CONSERVATIVELY, ANNUAL REPAIRS ARE 563

- FLEET SIZE - 2,091

ARMY	1,415	COAST GUARD	36
NAVY	473	CUSTOMS SERVICE	16
AIR FORCE	99	FMS	46

- ESTIMATED FLYING HOURS PER MONTH - 12
- AVERAGE COST TO REPAIR IS \$ 2,400 / COST OF OWNERSHIP \$ 1.35 M
- ATCOM DESIRES TO REDUCE THE COST OF OWNERSHIP
- SEEKING INNOVATIVE SOLUTIONS TO IMPROVED LIFE CYCLE SUSTAINMENT
  - MANUFACTURER TO MECHANIC



# SCHEDULE - T700 Engine Starter



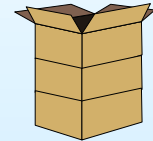
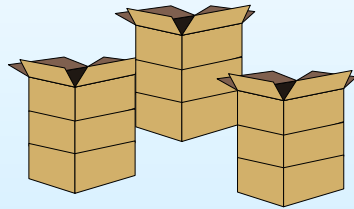
	April	May	June	July	Aug	Sep
Commerce Business Daily Announcement	17* ▲					
Briefing To Industry		7* ▲				
Contractor Response(s)		Δ ————— 7				
Evaluate Contractor Response(s)			7 – 13 Δ — Δ			
Prepare Procurement Package			14 ————— 14 Δ ————— Δ			
Request For Proposal				15 Δ		
Contractor Response(s)				Δ ————— 15		
Evaluate Proposal(s)					16 – 29 Δ — Δ	
Baseline Cost Measure Review						1 – 9 Δ — Δ
Negotiation						10 – 16 Δ — Δ
Business and Legal Review						18 – 25 Δ — Δ
Contract Award						26 Δ



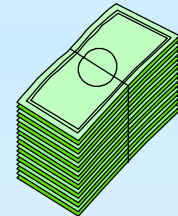
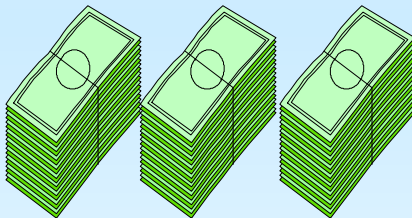


# Measure of Return

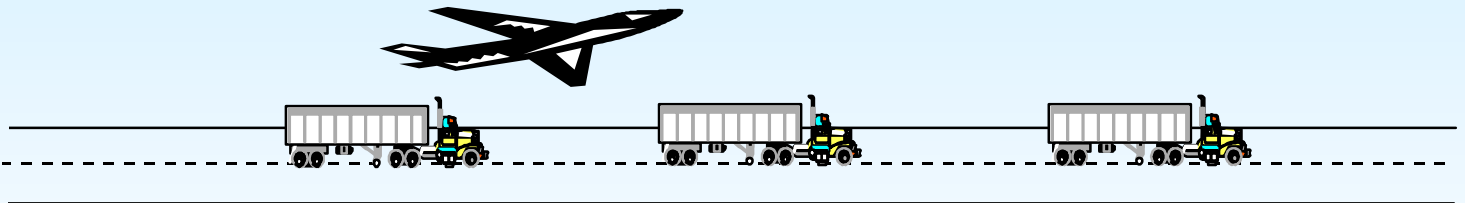
**Reduce Inventory**



**Lower Investment**

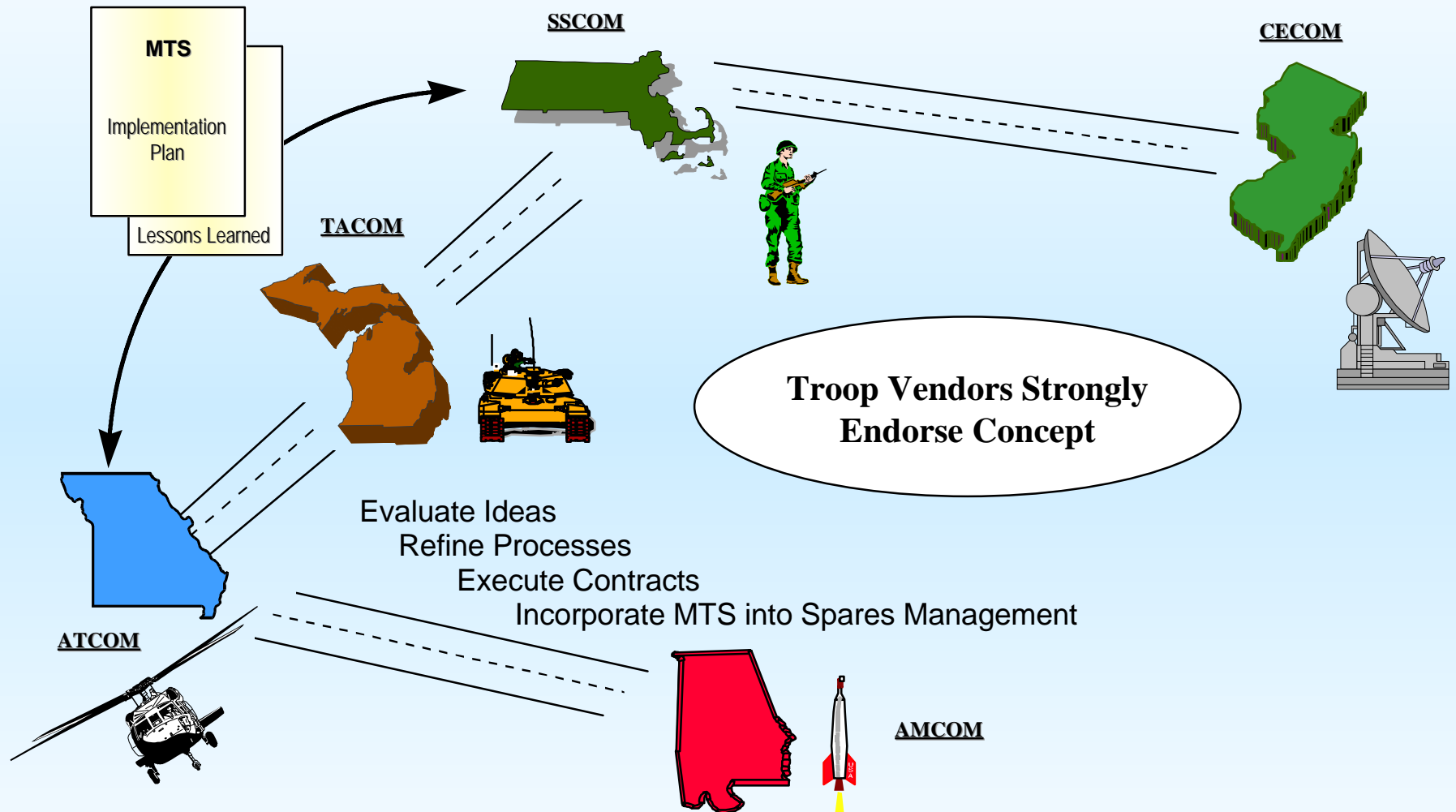


**Shorten the Pipeline**





# MTS Transitioning



**TEST Program has been Aviation Only -**



# NEXT STEPS



- **Release CBD Announcements - Additional Parts.**
- **Evaluate Industry Responses to T700 Engine Starter.**
- **Release Request For Proposal.**
- **Draft MTS Implementation Plan.**
- **Conduct Formal In-Process Review**
- **Draft Final MTS Report.**
- **Final MTS Report.**



# LESSONS LEARNED

- **Data Sources Inaccurate and Do Not Present Cohesive Picture.**
- **Maturing Spares Teams' Provide Command Focus.**
- **Methodology Identifies Candidates.**
- **Team Involvement Allows Down-Scoping to Highest Potential Return.**

- **Conduct Review Semi-Annually.**
- **Candidates in a Buy Position Yield Benefits More Rapidly.**
- **Overhaul Candidates Should Be Second.**

- **Industry Interest Exists.**
- **Projecting Obsolescence/Diminishing Resources will continue to be a Challenge.**
- **Performance Specs are Critical to MTS Success.**
- **Army needs focused and Automated Approach for Parts Consumption Data Gathering.**



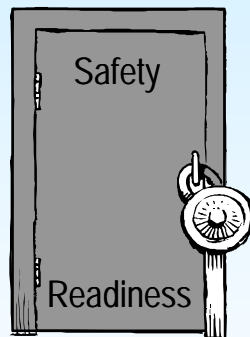
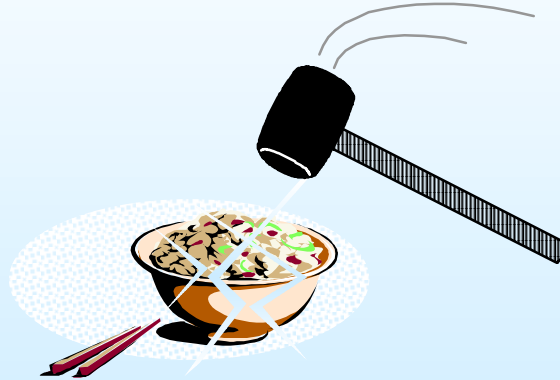
**Change In Concepts Very Difficult**



# SUMMARY

**MTS Requires Teamwork  
&**

**Outside the Box Thinking**



**Can Deliver Benefits when  
Methodology is properly applied**